TITLE

Modified antiviral peptides with increased activity and cell membrane affinity

CROSS-REFERENCE TO PRIOR APPLICATIONS

This is a U.S. national phase application under 35 U.S.C. §371 of International Patent Application No. PCT/EP2004/005563 filed on May 20, 2004, and claiming priority to British Application 0311565.6 filed May 20, 2003 and British Application 0319514.6 filed August 20, 2003, all of which are incorporated by reference herein in their entirety. The International Application was published in English on December 2, 2004 as WO 2004/104031 A2 under PCT Article 21(2).

DESCRIPTION

The invention relates to compounds with increased antiviral activity, in particular increased anti-HIV activity, due to the covalent graft on the original antiviral molecule of a structure capable of cell membrane interaction and/or crossing.

Background

Multiple branch peptide contstructions (MBPCs) comprise a core matrix to which small peptides are bonded. The core matrix is a dendritic polymer which is branched in nature, preferably with each of the branches thereof being identical. Although other core molecules are possible, the preferred core molecule is lysine. The core matrix can be built up from a central lysine residue, sometimes called the root of the MBPC. Two lysine residues are bonded to the central lysine residue, each through its carboxyl group to a different one of the amino groups of the central lysine residue. This provides a molecule with four amino groups, which may be the core matrix for an MBPC having four peptides. Alternatively by bonding a further four lysine residues, each through its carboxyl group to a different one of the said four amino groups, one can provide a molecule with eight branches. This molecule can serve as the core matrix for an MBPC having eight peptides or can alternatively receive eight lysine residues in the manner described above to form a core matrix for an MBPC having sixteen peptides. The C-ends of peptides are covalently bonded to each of the branches of the core matrix to form the MBPC. The peptides may be the same, which is preferred, or may be